IN THE CLAIMS

Please rewrite claim 22 in independent form as follows:

1-17. (Cancelled)

18. (Amended) A control and motor arrangement for a model toy train comprising:

a motor, configured and arranged to generate a locomotive force for propelling a model train;

a transducer operative in providing rotational position information from the motor, the rotational position information being characteristic of rotational position of the train wheels at which the motor is operating;

a control arrangement, coupled to the transducer to receive rotational information and configured and arranged to cause power to be applied to the motor at different times based on at least the rotational information provided by the transducer.

19. (Previously added) A control and motor arrangement, according to claim 18 wherein the control arrangement is configured and arranged to adjust an amount of power supplied to the motor in response to changes in the information received from the transducer.

20. (Previously added) A control and motor arrangement, according to claim 18, wherein the information received from the transducer is provided to a sound control arrangement.

21. (Previously added) A control and motor arrangement, according to claim 20, wherein the sound control arrangement is configured and arranged to select a sound effect for playing as a function of the information received from the transducer.

22. (Currently Amended) ~~A control and motor arrangement, according to claim 18~~ A control and motor arrangement for a model toy train comprising:

a motor, configured and arranged to generate a locomotive force for propelling a model train;

a transducer operative in providing rotational position information from the motor, the rotational position information being characteristic of rotational position of the train wheels at which the motor is operating;

a control arrangement, coupled to the transducer to receive rotational information and configured and arranged to cause power to be applied to the motor at different times based on at least the rotational information provided by the transducer, wherein the control arrangement is configured and arranged to simulate effects relative to inertia.

23. (Previously added) A control and motor arrangement, according to claim 22, wherein the control arrangements configured and arranged to, in response to power, being removed from the model train, supply power to the motor from an alternate power source.

24. (Previously added) A control and motor arrangement, according to claim 23, wherein the alternate power source comprises a battery arrangement.

25. (Previously added) A control and motor arrangement, according to claim 22, wherein the control arrangement is configured and arranged to, in response to a train start command, gradually supply power to the motor.

26. (Previously added) A control and motor arrangement for use in a model toy train comprising:

a motor, configured and arranged to generate a locomotive force for propelling the model train;

a transducer coupled to the motor and operative in producing a signal characteristic of rotational speed of the motor;

a control arrangement operative to detect an available track voltage and coupled to receive the rotational speed information from the transducer, the controller being configured and arranged to apply a percentage of the available track voltage to the motor and apply a greater percentage of available track voltage to the motor in response to a signal from the transducer characteristic of a decrease in the rotational speed of the motor.

27. (Previously added) A control and motor arrangement as in claim 26 wherein the controller is configured to set a desired speed in response to a horn signal made simultaneously with an increase in track voltage.

28. (Previously amended) A control and motor arrangement for a model toy train comprising:

a motor, configured and arranged to generate a locomotive force for propelling the model train;

a power arrangement, coupled to a model railroad track used by the model train and configured and arranged to supply power to the control and motor arrangement;

a radio control interface, configured to receive commands from a radio controller unit;

a process control arrangement, coupled to receive speed information regarding the rotational velocity of the motor and configured and arranged to generate a plurality of motor control signals based upon a combination of a plurality of speed feedback control signals and pulse width modulation signal;

a motor control arrangement, responsive to the motor control signals and coupled to receive power from the power arrangement and configured and arranged to supply power to the motor at different times based on the motor control signals; and

a sound information arrangement, operatively coupled to receive rotational speed and positional information from the motor and to provide the rotational speed and positional information to a sound control arrangement for simulating railroad sounds.

29. (Previously added) A control and motor arrangement, according to claim 28, further comprising:

a short circuit protection arrangement, operatively coupled to the motor and configured and arranged to remove power from the motor in response to a current flow exceeding and defined threshold.

30. (Previously added) A control and motor arrangement according to claim 28 further comprising a memory, responsive to the process control arrangement and configured and arranged so user defined information and to provide the user defined information to the process control arrangement.

31. (Previously added) A control and motor arrangement according to claim 30 wherein the memory comprises a non-volatile memory.

32. (Previously added) A control and motor arrangement according to claim 30 wherein the user defined information includes a mapping of a motor rotational speed to a land speed on the train.

33. (Previously added) A control and motor arrangement for a model toy train comprising:

a motor, configured and arranged to generate a locomotive force for propelling a model train;

a transducer operative in providing rotational position information from the motor, the rotational position information being characteristic of rotational position of the train wheels at which the motor is operating;

a control arrangement, coupled to the transducer to receive rotational information and configured and arranged to cause power to be applied to the motor at different times based on at least the rotational information provided by the transducer;

the control arrangement being configured and arranged to simulate effects relative to inertia and the control arrangement is configured and arranged to, in response to a train start command, gradually supply power to the motor.

34. (Previously added) A control and motor arrangement for a model toy train comprising:

a motor, configured and arranged to generate a locomotive force for propelling the model train;

a power arrangement, coupled to a model railroad track used by the model train and configured and arranged to supply power to the control and motor arrangement;

a radio control interface, configured to receive commands from a radio controller unit;

a process control arrangement, coupled to receive speed information regarding the rotational velocity of the motor and configured and arranged to generate a plurality of motor control signals based upon a combination of a plurality of speed feedback control signals and pulse width modulation signal;

a motor control arrangement, responsive to the motor control signals and coupled to receive power from the power arrangement and configured and arranged to supply power to the motor at different times based on the motor control signals;

a sound information arrangement, operatively coupled to receive rotational speed and positional information from the motor and to provide the rotational speed and positional information to a sound control arrangement for simulating railroad sounds; and

a short circuit protection arrangement operatively coupled to the motor and configured and arranged to remove power from the motor in response to a current flow exceeding a defined threshold.

35. (Previously added) A control and motor arrangement for a model toy train comprising:

a motor, configured and arranged to generate a locomotive force for propelling the model train;

a power arrangement, coupled to a model railroad track used by the model train and configured and arranged to supply power to the control and motor arrangement;

a radio control interface, configured to receive commands from a radio controller unit;

a process control arrangement, coupled to receive speed information regarding the rotational velocity of the motor and configured and arranged to generate a plurality of motor control signals based upon a combination of a plurality of speed feedback control signals and pulse width modulation signal;

a motor control arrangement, including a nonvolatile memory responsive to the process control arrangement, the memory configured and arranged to store user-defined information to provide user-defined information to the process control arrangement and the user defined information comprises a mapping of a motor rotational speed to a land speed on the train, the motor control arrangement responsive to the motor control signals and coupled to receive power from the power arrangement and configured and arranged to supply power to the motor at different times based on the motor control signals; and

a sound information arrangement, operatively coupled to receive rotational speed and positional information from the motor and to provide the rotational speed and positional information to a sound control arrangement for simulating railroad sounds.~~; and~~